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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/316,735 05/21/99 HUI

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EXAMINER

NGUYEN, T

ART UNIT

PAPER NUMBER

2832

DATE MAILED:

05/21/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.
09/316,735

Applicant(s)
Hui et al.

Examiner
Tuyen T. Nguyen

Art Unit
2832



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Feb 20, 2001
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-35 is/are pending in the application.
- 4a) Of the above, claim(s) 9-23 and 30-35 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 and 24-29 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- a) ☐ All b) ☐ Some* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- *See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

- 15) ☒ Notice of References Cited (PTO-892) 18) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 19) ☐ Notice of Informal Patent Application (PTO-152)
- 17) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____ 20) ☐ Other: _____

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DETAILED ACTION

Election/Restriction

1. Claims 9-23 and 30-35 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected claimed inventions, there being no allowable generic or linking claim. Election was made **without** traverse in Paper No. 10.

Drawings

2. Figures 1a-e, 5a-b, 28 and 29 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g).

Specification

3. The following guidelines illustrate the preferred layout and content for patent applications. These guidelines are suggested for the applicant's use.

Arrangement of the Specification

The following order or arrangement is preferred in framing the specification and, except for the reference to "Microfiche Appendix" and the drawings, each of the lettered items should appear in upper case, without underlining or bold type, as section headings. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

- (a) Title of the Invention.
- (b) Cross-References to Related Applications.
- © Statement Regarding Federally Sponsored Research or Development.
- (d) Reference to a "Microfiche Appendix" (see 37 CFR 1.96).
- (e) Background of the Invention.

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1. Field of the Invention.
 2. Description of the Related Art including information disclosed under 37 CFR 1.97 and 1.98.
- (f) Brief Summary of the Invention.
 - (g) Brief Description of the Several Views of the Drawing(s).
 - (h) Detailed Description of the Invention.
 - (I) Claim or Claims (commencing on a separate sheet).
 - (j) Abstract of the Disclosure (commencing on a separate sheet).
 - (k) Drawings.
 - (l) Sequence Listing (see 37 CFR 1.821-1.825).

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 1-8 and 24-29 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 1, line 2, applicant should clarify what is intended by “deposited on opposed sides of a printed circuit board.” Applicant should clarify whether it is intended that first and second windings are deposited on both sides of the circuit board. In lines 2-3, applicant states that there is “no transformer core therebetween.” The specification and figures imply that there is no core at all. Applicant should clarify. Claims 2-8 inherit the defects of the parent claim.

Regarding claim 2, line 3, applicant should clarify what the “maximum” impedance of the transformer circuit is. Claim 2 does not define any specific structure and is not further limiting.

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Regarding claim 5, applicant should clarify the maximum impedance.

Regarding claim 6, line 3, applicant should clarify what is intended by "DC to 300kHz."

Regarding claim 7, how the adjusting takes place is unclear. The means for adjusting is not variable.

Regarding claim 24, applicant should clarify what is intended by "deposited on opposed sides of a printed circuit board." Applicant should clarify whether it is intended that first and second windings are deposited on both sides of the circuit board. Applicant should clarify how the adjusting takes place. The means for adjusting is not variable. Claim 25 inherits the defects of the parent claim.

Regarding claim 26, applicant should clarify what is intended by "deposited on opposed sides of a printed circuit board." In lines 2-3, applicant states that there is "no transformer core therebetween." The specification and figures imply that there is no core at all. Applicant should clarify. Claims 27-29 inherit the defects of the parent claim.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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7. Claims 1-2 and 26, as best understood in view of the rejection under 35 U.S.C. 112 second paragraph, are rejected under 35 U.S.C. 102(b) as being anticipated by the prior art of figures 1a-e or Japan 54-110424

The prior art of figures 1a-e and Japan 54-110424 discloses a high frequency coil [figures 1a-1e and figure 6b] comprising first and second windings deposited on opposed sides of a printed circuit board with no transformer core. The transformer inherently could have been operated at an optimum frequency in which the impedance of the transformer circuit is at a maximum. [it is noted that applicant has not claimed any specific structural details.]

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 1-3 and 26-27, as best understood in view of the rejection under 35 U.S.C. 112 second paragraph, are rejected under 35 U.S.C. 103(a) as being unpatentable over Japan 54-110424 or the prior art of figures 1a-e in view of Tolfen et al. [US 5,579,202].

Japan 54-110424 or the prior art of figures 1a-e disclose the instant claimed invention except for: the specific operating frequency

Tolfen et al. disclose a coreless transformer device [figure 8] operating at a frequency range of 500kHz to 4Mhz.

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It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the transformer operating design of Tolfsen et al. in Japan 54-110424 or the prior art of figures 1a-e for the purpose of increasing the operating frequency of the transformer.

10. Claims 4-6 and 28-29, as best understood in view of the rejection under 35 U.S.C. 112 second paragraph, are rejected under 35 U.S.C. 103(a) as being unpatentable over Japan 54-110424 or the prior art of figures 1a-e in view of Tolfsen et al. as applied to claims 1-3 and 26-27 above, and further in view of Commander et al. [US 4,748,532].

Japan 54-110424 or the prior art of figures 1a-e, as modified, disclose the instant claimed invention except for: the transformer being operated by a high-frequency carrier signal modulated by a low-frequency switching signal.

Commander et al. discloses a transformer being operated by a high-frequency carrier signal modulated by a low-frequency switching signal [see abstract].

It would have been obvious to one having ordinary skill in the art at the time the invention was made to operate the transformer of Japan 54-110424 or the prior art of figures 1a-e, as modified, to use a high-frequency carrier signal modulated by a low-frequency switching signal, as suggested by Commander et al., for the purpose of controlling oscillation.

To optimize the carrier signal and switching signal would have been obvious as a means to achieve optimal transformer performance.

11. Claims 7-8 and 25-26, as best understood in view of the rejection under 35 U.S.C. 112 second paragraph, are rejected under 35 U.S.C. 103(a) as being unpatentable over Japan 54-110424

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or the prior art of figures 1a-e in view of Tolfsen et al. and Commander et al. as applied to claims 1-6 and 28-29 above, and further in view of Miyoshi et al. [US 3,866,086].

Japan 54-110424 in view of the prior art of figures 1a-e, as modified, disclose the instant claimed invention except for: a capacitance being connected across the secondary winding for adjusting resonance frequency.

Miyoshi et al. discloses a transformer [figure 7] having a capacitance [29] being connected across the secondary winding for adjusting resonance frequency.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to add a capacitance about the secondary winding of Japan 54-110424 or the prior art of figures 1a-e, as modified, as suggested by Miyoshi et al., for the purpose of controlling resonance.


Conclusion

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Tuyen T. Nguyen whose telephone number is (703) 308-0821.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Michael Gellner, can be reached at (703)308-1721. The fax number for this Group is (703)305-1341.

Any inquiry of a general nature or relating to the status of this application of proceeding should be directed to the Group receptionist whose telephone number is (703)308-0956.

TTN
May 6, 2001


LINCOLN DONOVAN
PRIMARY EXAMINER
GROUP 2100